

Remarks

Claims 1-7 are pending with claims 1, 5 and 7 amended herein. Reconsideration of the application is respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Badische Anilin- & Soda-Fabrik AG, GB 1,167,793 (herein referred to as the '793 patent). Applicants traverse this rejection.

Claims 1-7 recite countercurrent extraction utilizing ethyl acetate. More specifically, the claims recite separating and recovering 3-hydroxypropionic acid from an aqueous solution comprising 3-hydroxypropionic acid and acrylic acid, using countercurrent extraction of the aqueous solution with an extractant comprising ethyl acetate.

The Examiner indicates that the '793 patent discloses countercurrently extracting acrylic acid from propionic acid utilizing ethyl acetate (Office action page 3, citing the '793 patent at col. 2, lines 1-3 and Table 1). In fact, the '793 patent teaches away from using ethyl acetate as an extractant.

The '793 patent explicitly states that ethyl acetate should not be used as it has many disadvantages, including requiring distillation, addition of salts (salting-out effect), the recovery of the salts, and multistage extraction requirements or the use of large amounts of solvents. ('793 patent, col. 1, lines 38-62). The '793 patent even explicitly states that ethyl acetate (along with other listed solvents) will not work to separate propionic acid, stating "Furthermore, impurities other than water, particularly propionic acid and acetic acid, cannot be removed satisfactorily [using ethyl acetate]." ('793 patent, col. 1, lines 62-64, emphasis added).

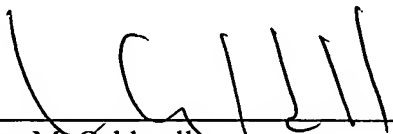
In addition, amended claim 3 recites that the recovered 3-hydroxypropionic acid has a purity of at least about 80% as separated from the aqueous solution comprising 3-hydroxypropionic acid and acrylic acid, without any further purification. The '793 patent does not teach the separation and recovery, without further purification, of 3-hydroxypropionic acid having a purity of at least about 80%. Instead, the '793 patent teaches separating out "impurities" including a mixture of propionic acid and acetic acid, from acrylic acid. ('793 patent, col. 2, lines 1-3.)

Accordingly, claims 1-7 are patentable over the art of record. The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would facilitate allowance of this application. Please note that this application is being prosecuted by Applicants' new counsel. A Revocation of Prior Powers/Power of Attorney document shall be submitted shortly.

Respectfully submitted,

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